APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,166	06/26/2001	Stephen A. Roth	18360/214077	2378 ·

7590   12/29/2004

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EXAMINER
DAVIS, CYNTHIA L

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 July 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *2/19/2002*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1-4, 6, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated

by Lu (5896422).

Regarding claim 1, a method for adjusting a received bit detection threshold in a

digital communication system is disclosed in Lu. Receiving a self-generated broadcast

signal is disclosed in column 11, lines 60-65 (the circuit generates an output signal,

which is received by the A/D converter). Determining a median value of the self-

generated broadcast signal is disclosed in column 11, lines 35-42 (only the "flat top," or

peak values, of the signal are averaged, so the average would be the same as the

median in this case). Adjusting the bit detection threshold based on the median value is

disclosed in column 13, lines 48-51.

Regarding claim 2, digitizing the received self-generated broadcast signal prior to

determining the median value of the self-generated broadcast signal is disclosed in

column 11, line 66-column 12, line 1 and column 12, lines 11-13 (the signal goes

through the A/D converter before it goes to the averager circuit).

Regarding claim 3, receiving a self-generated broadcast signal further comprises

receiving an ownship broadcast signal and wherein the step of determining a median

value of the self-generated broadcast signal further comprises determining a median value of the ownship broadcast signal is disclosed in Lu, column 11, lines 60-65 (the signal is self-generated, which is the definition of ownship signal given in the instant specification on page 3, line 6).

Regarding claim 4, detecting a positive peak frequency value and a negative frequency peak value for the self-generated broadcast signal and determining a peak-to-peak deviation of the self-generated broadcast signal is disclosed in Lu, column 11, lines 35-42.

Regarding claim 6, detecting a positive peak value and a negative frequency peak value for a self-generated broadcast signal further comprises detecting a positive peak value and a negative frequency peak value substantially concurrent with the self-generated broadcast signal being transmitted is disclosed in Lu, column 11, lines 35-42.

Regarding claim 9, receiving an analog ownship broadcast signal is disclosed in Lu, column 11, lines 60-65 (the signal is self-generated, which is the definition of ownship signal given in the instant specification on page 3, line 6). Digitizing the analog ownship broadcast signal at a predefined data rate is disclosed in column 11, line 66-column 12, line 1 and column 12, lines 11-13 (the signal goes through the A/D converter before it goes to the averager circuit). Detecting a positive peak value and a negative frequency peak value from the digitized ownship signal and calculating a peak-to-peak deviation for the digitized ownship signal based on the positive and negative frequency peak values is disclosed in Lu, column 11, lines 35-42. Adjusting the bit detection threshold based on the peak-to-peak deviation is disclosed in column 13, lines 48-51.

Regarding claim 11, an analog-to-digital (A/D) converter that digitizes an analog baseband input signal by sampling the signal at a predefined data rate is disclosed in Lu, figure 6, element 104. A positive peak detector in electrical communication with the A/D converter that receives the signal from the A/D converter and determines a positive peak value, a negative frequency peak detector in electrical communication with the A/D converter that receives the signal from the A/D converter and determines a negative frequency peak value, and a calculation task unit in data communication with the negative and positive peak detectors that calculates a peak-to-peak deviation to formulate a bit detection threshold value is disclosed in Lu, column 11, lines 35-42. A bit detector in data communication with the calculation task unit and in electrical communication with the A/D converter that receives the digitized signal from the A/D converter and the bit detection threshold value from the calculation task unit for the purpose of converting the digitized signal to a digitized bit stream of data is disclosed in column 11, line 51 (the digitized signal is processed as a data bit stream).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 5, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Holloway.

Regarding claim 5, filtering the peak-to-peak deviation to substantially reduce short-term jitter and define the bit detection threshold value is missing from Lu. However, Holloway discloses in column 9, lines 64-65, using a filter to reduce short-term jitter. Reducing jitter has the effect of fine-tuning the definition of the bit threshold value. It would have been obvious to one skilled in the art at the time of the invention to use a filter in the circuit. The motivation would be to reduce the short-term jitter of the threshold value.

Regarding claim 10, filtering the calculated peak-to-peak deviation to reduce short-term jitter is missing from Lu. However, Holloway discloses in column 9, lines 64-65, using a filter to reduce short-term jitter. It would have been obvious to one skilled in the art at the time of the invention to use a filter in the circuit. The motivation would be to reduce the short-term jitter of the threshold value.

Regarding claim 13, a filter in data communication with the calculation task unit that filters the peak-to-peak deviation value to reduce short-term jitter is missing from Lu. However, Holloway discloses in column 9, lines 64-65, using a filter to reduce short-term jitter. It would have been obvious to one skilled in the art at the time of the invention to use a filter in the circuit. The motivation would be to reduce the short-term jitter of the threshold value.

3.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Ueunten.

Regarding claim 7, the step of receiving a self-generated broadcast signal further comprises receiving a self-generated broadcast signal through an intermediate level

frequency feedback path is missing from Lu. However, Ueunten discloses in column 5,

liens 21-23 using a frequency feedback path to help maintain a desired output voltage in

the face of externally applied signals. It would have been obvious to one skilled in the

art to use a frequency feedback path. The motivation would be to reduce the effects of

external noise on the signal.

Regarding claim 8, the step of receiving a self-generated broadcast signal further

comprises receiving a self-generated broadcast signal through a transmit signal level

frequency feedback path is missing from Lu. However, Ueunten discloses in column 5,

liens 21-23 using a frequency feedback path to help maintain a desired output voltage in

the face of externally applied signals. It would have been obvious to one skilled in the

art to use a frequency feedback path. The motivation would be to reduce the effects of

external noise on the signal.

4.	Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in

view of McGibney.

Regarding claim 12, the positive peak detector and the negative frequency peak

detector being activated to detect frequency peaks when the TDMA communication

device begins sending a signal and deactivated when the TDMA communication device

completes sending the signal is missing from Lu. However, McGibney discloses in

column 10, lines 14-24, a peak detector in a TDMA system that is enabled during the

TDMA frame, and then disabled. It would have been obvious to one skilled in the art to

enable the peak detectors only when the system is transmitting. The motivation would

be to only have the peak detectors on when they are needed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia L Davis whose telephone number is (571) 272-3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CLD
11/29/2004

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